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NPTEL

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Course outline

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Week 0

Quiz : Assignment 0

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Interaction Session

TEXT Transcription

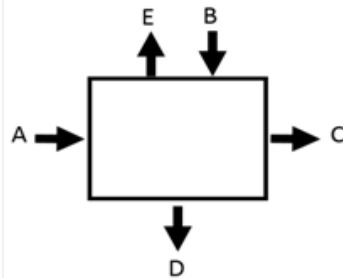
Assignment 0

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2019-02-04, 23:59 IS**

1) The material balance for the system below can be written as:

1 point



- A+B=C+D+E
- A+B-C-D=E
- A+B-C-D-E=0
- All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of the above

2) Solve for x : $2x = 8^3$

1 point

- 64
- 256
- 24
- 512

No, the answer is incorrect.

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- 1
 -2
 0

No, the answer is incorrect.

Score: 0

Accepted Answers:

-2

4) Solve for x: $x^2 + 3x = 4$

- x=1,- 4
 x=1,4
 x=-1,4
 x=-1,-4

No, the answer is incorrect.

Score: 0

Accepted Answers:

x=1,- 4

5) Find the value of $\log_{10} 1000$

- 0
 1
 2
 3

No, the answer is incorrect.

Score: 0

Accepted Answers:

3

6) What is the order of the following ordinary differential equation? $\frac{d^2y}{dx^2} + 3x \frac{dy}{dx} = 5y$

- 0
 1
 2
 3

No, the answer is incorrect.

Score: 0

Accepted Answers:

2

7) What is the degree of the following ordinary differential equation? $\frac{d^2y}{dx^2} + 3x \frac{dy}{dx} = 5y$

- 0
 1
 2
 3

No, the answer is incorrect.

Score: 0

Accepted Answers:



1 point



1 point

1 point

1 point

1

8) Consider a particle moving along a straight line such that its velocity is inversely proportional to the square of the distance (R) travelled. Formulate a differential equation that explains this relationship **1 point**



$$\frac{dR}{dt} = \text{constant} * R^2$$



$$\frac{dR}{dt} = R^2$$



$$\frac{dR}{dt} = \frac{\text{constant}}{R^2}$$



$$\frac{dR}{dt} = \frac{1}{R^2}$$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$$\frac{dR}{dt} = \frac{\text{constant}}{R^2}$$

9) $\int \frac{dx}{x+4} = ?$

1 point



$$\ln|x+4| + c$$



$$4\ln|x| + c$$



$$\frac{1}{(x+4)^2} + c$$



None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

$$\ln|x+4| + c$$

10) Which of the following is a solution for $\frac{dy}{dx} + 5y = 0$?

1 point



$$y = 2x + c$$



$$y = \frac{2}{3}x + c$$



$$y = \frac{3}{2}x + c$$



$$y = e^{-5x} + c$$

No, the answer is incorrect.

Score: 0

Accepted Answers:

$$y = e^{-5x} + c$$



End

